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Kil-soo Jung

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EXAMINER

JONES, HEATHER RAE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/770,128	Applicant(s) JUNG ET AL.	
	Examiner Heather R. Jones	Art Unit 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-69 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 47-54 is/are allowed.
- 6) ☒ Claim(s) 1-44 and 57-69 is/are rejected.
- 7) ☒ Claim(s) 45 and 46 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 February 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 8/16/2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "81" has been used to designate both Lead-In Area (Fig. 8) and the remaining papers in ENAV-UNIT#2 (Fig. 14).
2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "82" has been used to designate both File System Area (Fig. 8) and the remaining papers in ENAV-UNIT#3 (Fig. 14).
3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: Fig. 8 – reference characters "81", "82", "83", and "85".

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-22, 44, 63-69 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 1-22, 44, 63-69 define an information storage medium embodying functional descriptive material. However, the claim does not define a computer-readable medium or memory and is thus non-statutory for that reason (i.e., "When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized" – Guidelines Annex IV). That is, the scope of the presently claimed information storage medium could mean a piece of paper on which the program is written.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-43, 55-59, 62, 63-67 are rejected under 35 U.S.C. 102(e) as being anticipated by Yoon et al. (U.S. Patent Application Publication 2004/0146281).

Regarding claim 1, Yoon et al. discloses an information storage medium for use with a recording and/or reproducing apparatus, the medium comprising: audio/video (AV) data (paragraph [0008]); and interactive data to be reproduced with the AV data by the recording and/or reproducing apparatus in an interactive mode (paragraph [0008]), wherein: the interactive data comprises a plurality of ENAV units (Fig. 2), and each of the ENAV units corresponds to a portion of the AV data and has a size less than a predetermined size (Fig. 2).

Regarding claim 2, Yoon et al. discloses all the limitations as previously discussed with respect to claim 1 including that the information storage medium comprises an area in which the plurality of ENAV units are continuously recorded (as can be seen in Fig. 2).

Regarding claim 3, Yoon et al. discloses all the limitations as previously discussed with respect to claim 1 including that the interactive data comprises link information specifying a relation between the AV data and the corresponding ENAV units, and the link information is described using a structure of the AV data (paragraph [0055] – the animation images are reproduced according to their association with the main AV data).

Regarding claim 4, Yoon et al. discloses all the limitations as previously discussed with respect to claim 1 including that the interactive data comprises link information specifying a relation between the AV data and the corresponding

ENAV units, and the link information is described using reproduction time information of the AV data (paragraph [0055] – the main AV data and the animation images that are associated are reproduced at the same time meaning they are linked using reproduction times accordingly).

Regarding claim 5, Yoon et al. discloses all the limitations as previously discussed with respect to claim 1 including that the interactive data comprises link information specifying a relation between the AV data and the corresponding ENAV units, and the link information is described using reproduction location information of the AV data (paragraph [0055] – in order to reproduce the animation images and main AV data together the reproduction location information would have to be included in order to be able to find the correct images on the disk to reproduce together).

Regarding claim 6, Yoon et al. discloses all the limitations as previously discussed with respect to claim 1 including that each of the ENAV units comprises at least one markup resource (Fig 2 – each ENAV unit has as associated XHTML Document with it).

Regarding claim 7, Yoon et al. discloses all the limitations as previously discussed with respect to claims 1 and 4 including that each of the ENAV units comprises: at least one ENAV page including a markup resource, and the ENAV page includes synchronization information indicating a time at which to display the ENAV page (paragraph [0055] – the main AV data and the animation images

that are associated are reproduced at the same time meaning they are linked using reproduction times accordingly along with the corresponding ENAV page).

Regarding claim 8, Yoon et al. discloses all the limitations as previously discussed with respect to claims 1 and 7 including that the ENAV page comprises a markup document. (Fig 2 – each ENAV unit has as associated XHTML Document with it).

Regarding claim 9, Yoon et al. discloses all the limitations as previously discussed with respect to claims 1, 7, and 8 including that the markup document comprises a startup file including the link information (paragraph [0047]).

Regarding claim 10, Yoon et al. discloses all the limitations as previously discussed with respect to claims 1, 7, and 8 including that the markup document comprises a schedule file including the link information (paragraph [0047]).

Regarding claim 11, Yoon et al. discloses all the limitations as previously discussed with respect to claims 1, 7, and 8 including that corresponding synchronization information is recorded in each ENAV page including the markup resource (Fig. 1 – the AV renderer (15) outputs the synchronized AV data).

Regarding claim 12, Yoon et al. discloses all the limitations as previously discussed with respect to claims 1, 7, 8, and 11 including that the AV data comprises DVD-Video data having corresponding presentation time stamps, and the link information and the synchronization information are described using the presentation time stamp of the corresponding DVD-Video data (paragraph [0055] – the main AV data and the animation images that are associated are

reproduced at the same time meaning they are linked using reproduction times accordingly).

Regarding claim **13**, Yoon et al. discloses all the limitations as previously discussed with respect to claims 1, 7, 8, and 11 including that the AV data is DVD-Video data having corresponding logical block locations, and the link information and the synchronization information are described using logical block location information of the corresponding DVD-Video data (paragraph [0055] – in order to reproduce the animation images and main AV data together the reproduction location information would have to be included in order to be able to find the correct images on the disk to reproduce together).

Regarding claim **14**, Yoon et al. discloses an information storage medium for use with a recording and/or reproducing apparatus, the medium comprising: audio/video (AV) data (paragraph [0008]); and interactive data to be reproduced by the recording and/or reproducing apparatus with the AV data in an interactive mode (paragraph [0008]), wherein: the interactive data comprises a plurality of ENAV units, each of the ENAV units is smaller than a predetermined size (Fig. 2), and each ENAV unit includes a start page stored with a predetermined start file name recognized by the recording and/or reproducing apparatus to associate and/or control the buffering of the ENAV unit with the corresponding AV data during the interactive mode (Fig. 2 – each document has a name associated that associates it to the corresponding ENAV unit).

Regarding claim **15**, Yoon et al. discloses all the limitations as previously discussed with respect to claim 14 including that each of the ENAV units comprises: at least one ENAV page, and the start page is one of the ENAV pages (Fig. 2 – XHTML Document).

Regarding claim **16**, Yoon et al. discloses all the limitations as previously discussed with respect to claim 14 including that the interactive data comprises a markup document and markup resources linked to the markup document (the ENAV navigation can be see in Fig. 2).

Regarding claim **17**, Yoon et al. discloses all the limitations as previously discussed with respect to claim 14 including that the AV data comprises DVD-Video data (Fig. 1 displays AV data coming from the DVD Playback Engine to be combined eventually with the interactive data).

Regarding claim **18**, Yoon et al. discloses an information storage medium for use with a recording and/or reproducing apparatus, the medium comprising: audio/video (AV) data (paragraph [0008]); and interactive data to be reproduced by the recording and/or reproducing apparatus with the AV data in an interactive mode (paragraph [0008]), wherein: the interactive data comprises a plurality of ENAV units, each of the ENAV units is smaller than a predetermined size (Fig. 2), and each ENAV unit includes a start page stored with a predetermined directory file name recognized by the recording and/or reproducing apparatus to associate and/or control the buffering of the ENAV unit with the corresponding

AV data during the interactive mode (Fig. 2 – each document has a name associated that associates it to the corresponding ENAV unit).

Regarding claim **19**, Yoon et al. discloses an information storage medium for use with a recording and/or reproducing apparatus, the medium storing: audio/video (AV) data (paragraph [0008]); and interactive data for use by the recording and/or reproducing apparatus for reproducing the AV data in an interactive mode (paragraph [0008]), wherein: the interactive data includes at least one ENAV page (Fig. 2), and at least one of the ENAV pages includes control command information for an ENAV buffer which the recording and/or reproducing apparatus uses to buffer the ENAV page (Fig. 1 – ENAV buffer (11)).

Regarding claim **20**, Yoon et al. discloses all the limitations as previously discussed with respect to claim 19 including that the control command information commands existing data stored in the ENAV buffer to be discarded (Fig. 1 – the ENAV Interface Handler (14) controls the ENAV buffer (11)).

Regarding claim **21**, Yoon et al. discloses all the limitations as previously discussed with respect to claim 19 including that the interactive data is divided into a plurality of ENAV units, and each of the ENAV units includes a corresponding one of the ENAV pages (Fig. 2 displays all the ENAV units as well as their associated pages).

Regarding claim **22** Yoon et al. discloses all the limitations as previously discussed with respect to claims 19 and 22, including that the control command information commands a buffered ENAV unit stored in the ENAV buffer to be

discarded and another ENAV unit to be read into the ENAV buffer (paragraph [0044]).

Regarding claim **23**, Yoon et al. discloses an apparatus for recording and/or reproducing audio/video (AV) data in an interactive mode, comprising: an ENAV buffer (11) which buffers interactive data for reproducing the AV data in the interactive mode, where the interactive data is divided into a plurality of ENAV units and each of the ENAV units has a size that is less than a predetermined size (Fig. 2); an ENAV buffer manager which controls the ENAV buffer so that the interactive data is read in and discarded in one or more units of the ENAV units; and a reproducing unit that reproduces the AV data in the interactive mode using the interactive data from the ENAV buffer (paragraph [0044]).

Regarding claim **24**, Yoon et al. discloses all the limitations as previously discussed with respect to claim 23 including that the ENAV buffer comprises a plurality of ENAV unit buffers, and a size of each of the ENAV unit buffers is at or greater than the predetermined size of each of the ENAV units (paragraphs [0043] and [0044]).

Regarding claim **25**, Yoon et al. discloses all the limitations as previously discussed with respect to claim 23 including that the ENAV buffer manager refers to the interactive data to detect link information between the AV data and the ENAV units and which is described using a structure of the AV data, and controls the ENAV buffer using the detected link information so that an ENAV unit is read

in before a display of a portion of the AV data that corresponds to the ENAV unit (paragraph [0055] – the animated images are reproduced according to their association with the main AV data).

Regarding claim **26**, Yoon et al. discloses all the limitations as previously discussed with respect to claim 23 including the ENAV buffer manager: refers to the interactive data to detect link information between the AV data and the ENAV units and which is described using a reproduction time information of the AV data, and controls the ENAV buffer using the detected reproduction time information so that an ENAV unit is read in before a display of a portion of the AV data that corresponds to the ENAV unit (paragraph [0055] – the main AV data and the animation images that are associated are reproduced at the same time meaning they are linked using reproduction times – Fig. 1).

Regarding claim **27**, Yoon et al. discloses all the limitations as previously discussed with respect to claim 23 including that the ENAV buffer manager: refers to the interactive data to detect synchronization information recorded in a markup document for each ENAV page in a corresponding ENAV unit, and controls the ENAV buffer using the detected synchronization information so that an ENAV unit corresponding to the synchronization information is read into the ENAV buffer (paragraph [0055] – the elements in the buffer are read in accordingly so they are not taking up memory when they are not needed).

Regarding claim **28**, Yoon et al. discloses all the limitations as previously discussed with respect to claims 23 and 27 including that the ENAV buffer

manager further refers to link information between the AV data and the ENAV units to control the ENAV buffer so that the corresponding ENAV unit is read into the ENAV buffer (paragraph [0055] – the elements in the buffer are read in accordingly so they are not taking up memory when they are not needed).

Regarding claim **29**, Yoon et al. discloses all the limitations as previously discussed with respect to claims 23, 27, and 28 including that the interactive data includes a markup document and markup resources linked to the markup document, the markup document includes a startup file in which the link information is recorded, and the synchronization information is recorded in the markup document corresponding to each ENAV page (Fig. 2 displays the ENAV navigation).

Regarding claim **30**, Yoon et al. discloses all the limitations as previously discussed with respect to claims 23, 27, and 28 including that the AV data is DVD-Video data having corresponding presentation time stamps, and the link information and the synchronization information are described by using a corresponding presentation time stamp of the DVD-Video data (paragraph [0055] – the main AV data and the animation images that are associated are reproduced at the same time meaning they are linked using reproduction times accordingly).

Regarding claim **31**, Yoon et al. discloses all the limitations as previously discussed with respect to claims 23, 27, and 28 including that the AV data is DVD-Video data having corresponding logical blocks, and the link information

and the synchronization information are described using corresponding logical block information of the DVD-Video data (paragraph [0055] – in order to reproduce the animation images and main AV data together the reproduction location information would have to be included in order to be able to find the correct images on the disk to reproduce together).

Regarding claim **32**, Yoon et al. discloses an apparatus for reproducing audio/video (AV) data in an interactive mode, comprising: an ENAV buffer (11) which buffers interactive data for reproducing the AV data in the interactive mode, where the interactive data is divided into a plurality of ENAV units, and each of the ENAV units is smaller than a predetermined size (Fig. 2); an ENAV buffer manager which controls the ENAV buffer so that, if a start page having a predetermined file name is found, a corresponding one of the ENAV units is read into the ENAV buffer; and a reproducing unit that reproduces the AV data in the interactive mode using the interactive data from the ENAV buffer (Fig. 2 – each document has a name associated that associates it to the corresponding ENAV unit; paragraph [0044]).

Regarding claim **33**, Yoon et al. discloses an apparatus for reproducing audio/video (AV) data in an interactive mode, comprising: an ENAV buffer (11) which buffers interactive data for reproducing the AV data in the interactive mode, where the interactive data is divided into a plurality of ENAV units, and each of the ENAV units is smaller than a predetermined size (Fig. 2); an ENAV buffer manager which controls the ENAV buffer so that a corresponding one of

the ENAV units is read into the ENAV buffer when a directory with a predetermined name is detected (Fig. 2 – each document has a name associated that associates it to the corresponding ENAV unit); and a reproducing unit that reproduces the AV data in the interactive mode using the interactive data from the ENAV buffer (Fig. 1).

Regarding claim **34**, Yoon et al. discloses all the limitations as previously discussed with respect to claim 32 including that the ENAV unit has at least one ENAV page and the start page is one of the ENAV pages (Fig. 2 – XHTML document).

Regarding claim **35**, Yoon et al. discloses all the limitations as previously discussed with respect to claim 32 including that the interactive data includes a markup document and markup resources linked to the markup document (Fig. 2 displays the ENAV navigation).

Regarding claims **36-43**, these are method claims corresponding to the apparatus claims 23 and 25-31. Therefore, claims 36-43 are analyzed and rejected as previously discussed with respect to claims 23 and 25-31.

Regarding claim **55**, Yoon et al. discloses a recording and/or reproducing apparatus for reproducing first data in an interactive mode, comprising: a buffer (11) which buffers units of interactive data for reproducing corresponding portions of the first data in the interactive mode (Fig. 1); a buffer manager (14) which controls the buffer so that a corresponding one of the units is read into the buffer (Fig. 1; paragraph [0044]); and a reproducing unit (15) that reproduces the first

data in the interactive mode using the interactive data from the buffer, wherein the first data is organized in a first directory, and the interactive data is organized in an interactive directory logically separated from the first directory (Figs. 1 and 2 – the ENAV navigation is displayed in Fig. 2).

Regarding claim **56**, Yoon et al. discloses all the limitations as previously discussed with respect to claim 55 including that the interactive directory includes folders in which corresponding units of the interactive data are organized, and the recording and/or reproducing apparatus detects a folder having a predetermined name, and buffers a corresponding unit of the interactive data from the detected folder having the predetermined name (the ENAV navigation is displayed in Fig. 2).

Regarding claim **57**, Yoon et al. discloses all the limitations as previously discussed with respect to claims 55 and 56 including that the recording and/or reproducing apparatus detects a command from a file in the detected folder, and the buffer manager is controlled by the detected command to buffer the corresponding unit from the folder before the corresponding portion of the first data is read (Figs. 5, 6, and 7).

Regarding claim **58**, Yoon et al. discloses all the limitations as previously discussed with respect to claim 55 including that the interactive directory includes folders in which the units of the interactive directory are organized, the recording and/or reproducing apparatus is referred to one of the folders in the interactive directory during reproduction of the first data in the interactive mode, and detects

a command from a file in the referenced folder, and the buffer manager is controlled by the detected command to buffer the corresponding unit from the folder before the corresponding portion of the first data is read (Figs. 2, 5, 6, and 7).

Regarding claim **59**, Yoon et al. discloses all the limitations as previously discussed with respect to claims 55 and 58 including that the file further includes a command to delete one of the units stored in the buffer in which the corresponding unit is to be preloaded.

Regarding claim **62**, Yoon et al. discloses all the limitations as previously discussed with respect to claim 55 including that the first data and the interactive data read by the recording and/or reproducing apparatus are stored on a storage medium, the first data is stored in a first area of the storage medium, and the interactive data is stored in a second area of the storage medium other than the first area (paragraphs [0007] and [0008]).

Regarding claims **63-67**, these are information storage medium claims that correspond to the apparatus claims 55-59. Therefore, claims 63-67 are analyzed and rejected as previously discussed with respect to claims 55-59.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 60, 61, 68, and 69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoon et al. as applied to claim 55 above, and further in view of Kim et al. (U.S. Patent Application Publication 2004/0184766).

Regarding claim **60**, Yoon et al. discloses all the limitations as previously discussed with respect to claim 55, but fails to disclose that the first directory comprises a VIDEO_TS directory, the interactive directory is a DVD_ENAV directory having folders, and each unit of the interactive data is organized in a corresponding folder of the DVD_ENAV directory.

Referring to the Kim et al. reference, Kim et al. discloses an apparatus wherein the first directory comprises a VIDEO_TS directory, the interactive directory is a DVD_ENAV directory having folders, and each unit of the interactive data is organized in a corresponding folder of the DVD_ENAV directory (Fig. 2).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have named the directories VIDEO_TS and DVD_ENAV as disclosed by Kim et al. in the apparatus disclosed by Yoon et al. in order for them to easily distinguish between the two directories.

Regarding claim **61**, Yoon et al. in view of Kim et al. discloses all the limitations as previously discussed with respect to claims 55 and 60 including that the DVD_ENAV directory includes a markup document which includes link information which associates the folders with the first data in the VIDEO_TS so

as to allow the portion of the reproduced first data to be reproduced with a corresponding unit of the interactive data read from the corresponding folder (Kim et al: Fig. 2; paragraphs [0030] and [0031]).

Regarding claims **68** and **69**, these are information storage medium claims that correspond to the apparatus claims 60 and 61. Therefore, claims 68 and 69 are analyzed and rejected as previously discussed with respect to claims 60 and 61.

Allowable Subject Matter

9. Claims 44-46 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. The following is a statement of reasons for the indication of allowable subject matter: Prior art fails to teach or fairly suggest a recording and/or reproducing apparatus for reproducing first data in an interactive mode, comprising: an amount L_r of the AV data read for each corresponding ENAV unit to be read is $L_r > ((2 \times T_j + L_e / V_r) \times V_{ox} V_r) / (V_r - V_o)$, wherein T_j denotes a time required to read the corresponding ENAV unit by a pickup of the apparatus, L_e denotes the size of the corresponding ENAV unit, V_r denotes a speed with which the AV data is read from an information storage medium, and V_o denotes a decoding speed with which the read AV data is decoded (claims 44-46).

11. Claims 47-54 allowed.

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12. The following is an examiner's statement of reasons for allowance: Prior art fails to teach or fairly suggest a recording and/or reproducing apparatus for reproducing first data in an interactive mode, comprising: an amount L_r of the AV data read for each corresponding ENAV unit to be read is $L_r > ((2 \times T_j + L_e/V_r) \times V_{ox} V_r) / (V_r - V_o)$, wherein T_j denotes a time required to read the corresponding ENAV unit by a pickup of the apparatus, L_e denotes the size of the corresponding ENAV unit, V_r denotes a speed with which the AV data is read from an information storage medium, and V_o denotes a decoding speed with which the read AV data is decoded (Independent claim 47).

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Tsumagari et al. (U.S. Patent Application Publication 2003/0161615) discloses ENAV units and their navigation paths.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Heather R. Jones whose telephone number is 571-272-

7368. The examiner can normally be reached on Mon. - Thurs.: 7:00 am - 4:30 pm, and every other Fri.: 7:00 am - 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller can be reached on 571-272-7353. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Heather R Jones
Examiner
Art Unit 2621

HRJ
June 25, 2007



JOHN MILLER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600